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Applicati n Number

10/038,317

Filing Date

December 28, 2001

First Named Inventor

Gregory M. LANZA, et al.

Group Art Unit

1619

Examiner Name

To be assigned

Attorney Docket No.

532512000312

### ENCLOSURES (check all that apply)

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Remarks

### SIGNATURE OF APPLICANT, ATTORNEY OR AGENT

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Date	August 19, 2002

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PATENT  
Docket No. 53251000312  
Serial No. 10036317

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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In the application of:

Gregory M. LANZA , et al.

Serial No.: 10/036,317

Filing Date: December 28, 2001

For: SITE SPECIFIC BINDING SYSTEM,  
IMAGING COMPOSITIONS AND  
METHODS

Examiner: To be assigned

Group Art Unit: 1619

**PRELIMINARY AMENDMENT B**

Assistant Commissioner for Patents  
Washington, D.C. 20231

Dear Sir:

This amendment supercedes a preliminary amendment A filed along with the application herein. In preliminary amendment A, claim 4 was canceled and claims 11-19 were added.

## AMENDMENT

Please cancel claims 1-3 and 5-19 and substitute the following claims:

20. (New) A method for enhanced magnetic resonance imaging of a target tissue in a subject *in vivo* which method comprises

detecting a magnetic resonance image of said target tissue wherein said target tissue is bound to a ligand specific for said target tissue and wherein said ligand is directly coupled to lipid-coated liquid perfluorocarbon particles contained in an emulsion,

B) which method further comprises, prior to said detecting, administering said emulsion to said subject.

21. (New) The method of claim 20, wherein said lipid-coated liquid perfluorocarbon particles further comprise at least one chemotherapeutic agent or gene therapy delivery system.

22. (New) The method of claim 20, wherein said ligand comprises an antibody or fragment thereof, a virus, a receptor agonist or antagonist, a hormone, or a nucleic acid.

23. (New) The method of claim 22, wherein the ligand is an antibody or fragment thereof.

24. (New) A method for enhanced magnetic resonance imaging of a target tissue in a subject *in vivo* which method comprises administering to said subject an emulsion comprising a ligand specific for said target tissue, said ligand directly coupled to lipid-coated liquid perfluorocarbon particles, and

detecting a magnetic resonance image of said target tissue wherein said target tissue is bound to said ligand and wherein said ligand is directly coupled to lipid-coated liquid perfluorocarbon particles contained in said emulsion.

25. (New) The method of claim 24, wherein said lipid-coated liquid perfluorocarbon particles further comprise at least one chemotherapeutic agent or gene therapy delivery system.

26. (New) The method of claim 24, wherein said ligand comprises an antibody or fragment thereof, a virus, a receptor agonist or antagonist, a hormone, or a nucleic acid.

27. (New) The method of claim 26, wherein the ligand is an antibody or fragment thereof.

28. (New) A method for magnetic resonance ultrasound imaging of a target tissue in a subject *in vivo* which method comprises

B/ detecting a magnetic resonance image of said target tissue wherein said target tissue is bound to a ligand specific for said target tissue and wherein said ligand is directly coupled to lipid-coated liquid perfluorocarbon particles contained in an emulsion,

wherein said subject has been administered said emulsion prior to said detecting.

29. (New) The method of claim 28, wherein said lipid-coated liquid perfluorocarbon particles further comprise at least one chemotherapeutic agent or gene therapy delivery system.

30. (New) The method of claim 28, wherein said ligand comprises an antibody or fragment thereof, a virus, a receptor agonist or antagonist, a hormone, or a nucleic acid.

31. (New) The method of claim 30, wherein the ligand is an antibody or fragment thereof.